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Learning to mentor: A mixed methods study of the nature and influence of Black professors' socialization into their roles as mentors

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Abstract: *While it has been long suggested graduate students are ill prepared for their teaching and service responsibilities as faculty, few have focused on the socialization of Black professors or the relationship between socialization and faculty mentoring patterns. This mixed methods study integrates an HLM analysis of a national dataset and pattern matching analysis of 28 interviews to explore how Black professors learn to mentor and how this process influences professors' work with students. Mentoring knowledge acquisition appears to increase the frequency and shape the nature of the relationships Black professors form with students. Findings indicate socialization is observational and informal, with participants often replicating the mentoring patterns of their advisors.*

All students need role models they can relate to for advice and encouragement (Wiley, 1989). Black faculty can serve as exceptional models of success in the academic arena, particularly for students of color (Banks, 1984; Plata, 1996). The availability of a mentor or role model that has dealt with similar struggles appears to be important to minority student achievement (Tinto, 1993), and in many cases Black faculty have experienced struggles and barriers similar to those of students of color. Based on this familiarity with what it is like to

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be a student of color, Black professors are able to offer a unique form of support and encouragement that underrepresented students both desire and need (Fries-Britt & Griffin, 2007; Guiffrida, 2005; Patton & Harper, 2003; Reddick, 2005).

Considering this line of research, it may be unsurprising that Black faculty are often described as carrying heavier advising and mentoring loads than their peers (Allen, Epps, Guillory, Suh, & Bonous-Hammarth, 2000; Patton & Harper, 2003; Umbach, 2006; Williams & Williams, 2006). While this engagement in mentoring is described as part of the general experience of Black professors, we have little understanding of how Black faculty vary in their mentoring patterns or the full range of factors which may encourage Black faculty to mentor students.

Specifically, we spend little time considering how faculty socialization—defined as the ways in which those aspiring to academic careers develop knowledge and adopt the skills and values necessary to be successful in their roles (Kirk & Todd-Mancillas, 1991; Weidman, Twale, & Stein, 2001)—translates into the time Black professors spend working with students. Work by scholars like Anthony and Taylor (2004) does consider the importance of socialization for Black students in graduate education. However, attention is largely focused on how these experiences relate to persistence in graduate school and interest in the professoriate rather than the acquisition of specific knowledge, particularly around mentoring, or how socialization translates to Black scholars' experiences as professors.

The purpose of this study is to explore the mentoring socialization process in which Black faculty engage, particularly while in graduate school. In addition to exploring whether and how professors learn to work with students, specific attention is paid to whether this learning is related to how Black professors participate in mentoring relationships as professors. The inadequacies of the faculty socialization process for training today's professors have been identified by several scholars (e.g. Adams, 2002; Austin, 2002; Berberet, 2008; Nyquist & Woodford, 2000); however, most of these scholars have focused on the lack of teacher training graduate students receive. The prevalence, nature, and influence of socialization around mentoring and student-faculty interaction has gone relatively unexplored. There are suggestions that professors build confidence in their mentoring and advising skills over time (Berberet, 2008); however, it is unclear whether knowledge about

mentoring and advising is acquired during graduate school, and what the process of mentoring knowledge acquisition entails. Additionally, few studies have considered the unique socialization process of Black graduate students or how training may shape their engagement in developmental relationships. For example, Austin's (2002) work makes important contributions to our understanding of faculty socialization, but she acknowledges that her sample lacked significant racial/ethnic diversity.

In an effort to expand our understanding of faculty socialization into mentoring broadly, and specifically the process for Black professors, this study was guided by the following research questions:

1. How is knowledge acquisition about mentoring and advising incorporated into Black professors' faculty socialization process?
2. How does mentoring knowledge acquisition shape the amount of time Black professors spend interacting with students?
3. How does mentoring knowledge acquisition shape how Black professors interact with students (e.g. the nature of their developmental relationships)?

Background

Defining Mentoring and Developmental Relationships

Mentoring has been defined inconsistently, making it challenging to examine in systematic ways (Jacobi, 1991; Kram, 1988). In light of this lack of clarity, Kram's (1988) more general definition of *developmental relationships* guides this study. Developmental relationships are understood as associations between senior (i.e. faculty) and junior individuals (i.e. students), focused on the junior member's personal and/or career development and growth. These relationships include components focused on career development and psycho-social support (Jacobi, 1991; Kram, 1988). The term developmental relationships, which will be used interchangeably with mentoring and advising throughout this work, is quite inclusive and accounts for many forms of faculty-student interaction outside of the classroom. This broad understanding provides room for an examination of both formal mentoring relationships and more informal interactions between professors and students taking place outside of the classroom. When professors participate in advisee-advisor relationships, guide students

through the dissertation process, provide career advice, collaborate with students on research, or offer support during a personal crisis, these activities can all be understood as engaging in developmental relationships.

A Framework for the Study of Mentoring

Hunt and Michael's (1983) mentoring framework guides data analysis for this study. Based on this framework, the study of developmental relationships can be understood as containing five dimensions: context within which developmental relationships emerge and take place, mentor's characteristics, protégé's characteristics, stages of the mentoring process, and the outcomes of mentoring relationships (for protégés, mentors, and the organization). Thus, this framework suggests the developmental relationships mentors form are influenced by three dimensions of the model: the environmental context of the organization, characteristics of the mentor, and the characteristics of the protégé(s).

Environmental Context

The inclusion of the first dimension, environmental context, suggests that developmental relationships can vary based on the type of profession or organization within which they take place, as well as the characteristics of the organization (e.g. size, geographic location, culture). Research on academic mentoring indicates the institutional mission can influence the extent to which faculty participate in developmental relationships. For example, faculty at liberal arts colleges and Historically Black Colleges and Universities (HBCUs), both regarded as having student-centered missions and a focus on teaching and learning, tend to spend more time working with students than their peers at research universities (Boyer, 1990; Checkoway, 2001; Pascarella, Wolniak, Cruce, & Blaich, 2004; Seifert, Drummond, Pascarella, 2006).

The campus climate is also an aspect of the environment which can potentially influence the time Black faculty members spend working with students. A campus racial climate consists of the attitudes, values, and behaviors of a campus community around issues of race and ethnicity, and has been linked to the experiences and outcomes of members of all constituent groups, particularly people of color (Hurtado, Milem, Clayton-Pederson, & Allen, 1999). A review of the literature reveals a great deal of overlap between climate related experiences of

Black faculty and students at predominantly White institutions (PWIs). The research on African American students illustrates their experiences at PWIs as being fairly isolating, with a lack of critical mass and fewer options for social engagement and integration than their White peers (Allen, 1985; Livingston & Stewart, 1987; Loo & Rollison, 1986; Person & Christensen, 1996). Black faculty at PWIs are also described as lonely; they are often the only African American in their department, and they report having less social interaction with their White colleagues (Blackwell, 1988; Butner, Burley, & Marbley, 2000; Johnsrud & DesJarlais, 1994). Racism, discrimination, and doubts about African Americans' intellectual capacity are also common threads in the experiences of these two groups. Many Black students report dealing with racist acts and comments, and also claim that their intelligence is underestimated by their faculty and peers (Cabrera, Nora, Terenzini, Pascarella, & Hagerdorn, 1999; D'Augelli & Hersherberger, 1993; Fries-Britt & Griffin, 2007). Black academics also encounter racism; both the research and the abilities of Black faculty are frequently called into question (Banks, 1984; Blackwell, 1988; Johnsrud & DesJarlais, 1994; Johnsrud & Sadao, 1998; Menges & Exum, 1983).

This similarity of experience has been described as leading students to seek Black faculty for understanding, support, and guidance (Fries-Britt & Griffin, 2007; Patton & Harper, 2003), thus potentially increasing the amount of time Black faculty spend with students in more hostile environments. However, just like students, the isolation of Black faculty in predominantly White institutions may enhance the need for these individuals to make connections and find support systems. Butner, Burley, and Marbley (2000) noted that Black faculty at predominantly White institutions may feel that it is particularly important to stay connected to their community and engage in African American cultural and social activities. Baez (2000) also suggests that professors of color may seek out race related service opportunities, particularly mentoring, because of their commitments to improving climate, desire to make connections across campus, and dedication to uplifting their communities.

Protégé and Mentor Characteristics

In addition to environmental forces, individual level characteristics, particularly those of the mentor and the protégé, have the potential to shape the mentoring behaviors of professors (Hunt & Michael, 1983).

Characteristics like gender, age, perceived similarity, power and position within an organization, and personality traits are described as drawing individuals together and shaping developmental relationships. In terms of protégé characteristics, research suggests racial/ethnic similarity can drive interest in forming developmental relationships with students. As noted above, students of color seek out Black faculty to gain support, guidance, and mentorship, perceiving these professors as having a unique understanding of their experiences (e.g. Banks, 1984; Blackwell, 1988; Bowman, Kite, Branscombe, & Williams, 1999; McKay, 1997; Patton & Harper, 2003). Black professors also may reach out with greater frequency when in the presence of students of color. For example, Reddick's (2005) study on relationships between African faculty and undergraduates revealed Black professors feel a special connection with their Black students and are drawn to working with them. Thus, we may see Black professors on campuses with more Black students interacting with students more frequently.

While Hunt and Michael (1983) highlight the importance of age, the research addressing the influence of mentors' personal characteristics on developmental relationships in academia has primarily focused on differences by gender. Johnsrud and DeJarlais (1994) found women report feeling they maintain heavier advising loads than their male counterparts and, according to Aguirre (2000), women are often called upon to use their "intuitive sense of compassion to deal with students" (p. 73), expected to serve as big sister, mother, or caretaker. McKay (1997) and Gregory (2001) concur, and report Black women may be especially subject to these demands, facing high expectations from students and colleagues about the quantity and quality of time Black female faculty will spend mentoring. While a topic of discussion and reflection, there is little empirical evidence distinguishing the time Black male and female faculty spend with students.

There is also a somewhat conflicting literature on the influence of a professor's academic discipline on their engagement in student contact. Early work by Gamson (1966) and Vreeland and Bidwell (1966) present disciplinary differences in interest and actual engagement in developmental relationships. Interestingly, these scholars all found math and science professors as less interested and likely to work with students outside of the classroom than their colleagues in other disciplines. Others suggest decisions to engage in student interaction are more deeply rooted

in individual differences, interests, and pedagogical styles, which have more complexity than can be captured in disciplinary categories (Pascarella, 1980; Snow, 1973). Thus the connection between academic discipline and mentoring, particularly for Black professors, is unclear.

Faculty Socialization as a Mentor Characteristic?

A professor's socialization into academia has been unexplored as a potential mentor characteristic that may relate to engagement with developmental relationships. The socialization and preparation graduate students receive to enter academic careers has increasingly come under question in recent years (Adams, 2002; Austin, 2002; Berberet, 2008; Nyquist & Woodford, 2000). Institutional leaders often perceive new hires as able researchers in their narrow fields, but lacking training to fulfill their other responsibilities (Adams, 2002; Nyquist & Woodford, 2000; Rice, Sorcinelli, & Austin, 2000).

Specifically, research suggests faculty are largely unprepared to mentor students outside of the classroom. Most faculty have some sense of how to help students with course selection or clarify tough concepts; however, Adams (2002) notes advising responsibilities can be surprisingly overwhelming, particularly for new professors. Berberet's (2008) study of early career faculty reveals that over a third of new professors have advising loads which exceed their expectations, and almost two thirds struggle with stress associated with meeting their students' expectations. Students may approach faculty with complex personal problems, seeking assistance most scholars have not been prepared to give. Others struggle with creating boundaries between students and themselves or when to limit their time engaged in student contact for their own self interests and success in a system which rarely rewards service (Adams, 2002).

Weidman and colleagues (2001) suggest there are three core elements in the academic socialization process: knowledge acquisition, investment, and involvement. Knowledge acquisition, or the process by which graduate students learn the skills and abilities necessary to be successful scholars, is the primary element of focus for this study. As they are socialized, the primary type of knowledge graduate students are acquiring addresses their need to be good researchers (Adams, 2002; Austin, 2002; Meyers, Reid, & Quina, 1998; Nyquist & Woodford, 2000; Slevin, 1992). It appears that graduate students are given limited opportunities to learn about their service oriented roles in systematic

ways, often based on the assumption individuals inherently know how to fulfill these responsibilities or will be able to learn quickly with few repercussions (Austin, 2002). For example, of the 450 faculty surveyed for a TIAA-CREF study of early career faculty, only 8% indicated graduate school effectively prepared them to advise undergraduates (Berberet, 2008).

It is important to acknowledge this lack of training; yet, what the socialization process looks like for those who do acquire knowledge about developmental relationships in graduate school is unknown. Recent reports document the increased levels of stress and confusion associated with this lack of instruction (e.g., Berberet, 2008). However, the influence of training to take on one's role as a mentor on faculty behaviors has not been studied, particularly in terms of how it could potentially shape participation in developmental relationships with both undergraduate and graduate students. In other words, it is unknown whether a lack of training in how to form developmental relationships, or a lack of mentoring knowledge acquisition, would be related to engaging in these relationships more or less often.

Methods

As this study aims to illuminate both whether and how training to engage in developmental relationships shapes the developmental relationships of Black professors, it is particularly well suited for mixed methods design. In addition to allowing for elaboration on themes and triangulation of data, a mixed methods design maximizes the benefits of both qualitative and quantitative methodology, allowing for greater depth and enhanced generalizeability of findings (Creswell & Plano Clark, 2007; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 1998).

Data were collected in two phases. The first phase of this project consists of an analysis of data collected from a national sample of African American university faculty regarding their backgrounds, perceptions, and experiences as professors. The quantitative data was used specifically to determine the influence of mentoring knowledge acquisition on the amount of time Black professors spend mentoring students (question #2).

The complimentary qualitative component is an interpretive multi-case study of 28 African American professors employed at two large, public research universities. This data was utilized to explore how professors described their process of mentoring knowledge acquisition during graduate school (question #1), how these graduate school experiences influence the nature of their mentoring relationships (question #3), and supplement our understanding of how mentoring knowledge acquisition influences the amount of time Black faculty spend engaged in developmental relationships.

Phase 1: Quantitative Analysis

Data source

The survey data were collected by the Higher Education Research Institute (HERI) at the University of California, Los Angeles. The HERI Faculty Survey is administered on a triennial basis to a national sample of faculty employed at American colleges and universities. The full sample of respondents to the 2004-2005 survey included 65,124 faculty. This survey is strongly based on the five Faculty Survey instruments that preceded it, and is designed to collect information about professors' background characteristics, preferred methods of teaching, patterns of time allocation, sources of satisfaction, and engagement in student interaction (Lindholm, Szelenyi, Hurtado, & Korn, 2005).

Sample

The sample was drawn from a larger group of respondents to the 2004 Faculty Survey. Analyses were initially run on all African American respondents who were professors or full time administrators with teaching responsibilities ($n=1465$, 201 institutions), then re-run on a subsample composed only of Black faculty employed at universities ($n=500$, 59 institutions). Only findings from the analysis of Black university faculty will be presented.

Black men outnumber women (male = 53.5%; female = 46.5%) in the research university subsample. Participants' ages ranged from under 30 to over 70, with the average respondent being between 45 and 54 years old. Fifty four percent ($n=270$) of participants had already received tenure, and another 28.4% ($n=142$) were in tenure line positions. Approximately a quarter (24.8%, $n=124$) of survey respondents indicated that they were full professors, 34.6% ($n=173$) were associate professors,

30.6% (n=153) were assistant professors, and 9.8% (n=49) were lectures, instructors, or had some other academic designation. There is great diversity in professors' academic appointments within this sample, with respondents indicating affiliations across 8 academic areas. The largest proportion had appointments in humanities and arts (24.0%, n = 120), life and health sciences (15.6%, n = 78), and social sciences (15.6%, n = 78). No professors were working at campuses designated Hispanic Serving Institutions (HSIs), and 10.6% (n=53) were employed at Historically Black Colleges and Universities (HBCUs).

Measures

The dependent variable of interest in this study accounts for faculty engagement in developmental relationships, represented by participants' responses to the following question: How many hours per week, on average, do you actually spend advising and counseling students (1 = no hours; 2 = 1-4 hours; 3 = 5-8 hours; 4 = 9-12 hours; 5 = 13+ hours)?

A total of 30 independent variables were used in these analyses (Table 1). Reflecting the dimensions outlined in Hunt and Michael's (1983) mentoring model, independent variables fall into three categories and were organized into blocks: 9 institutional context variables (e.g. institutional size, HBCU, campus climate); 20 mentor individual characteristic variables (e.g. age, gender, academic rank, discipline, training to mentor); and 1 protégé characteristic variable (perceptions of student ability).

Six specific variables within the institutional context block of variables are used to measure the influence of campus climate (Table 2). The individual measures of campus racial climate were identified through confirmatory factor analysis after a content analysis of the 2004 HERI Faculty Survey. The relationships between variables perceived as being related to various aspects of climate were tested using principal axis factoring and Varimax rotation. Items that had a factor score over .35 were used to develop the campus racial climate scales below. Tests for internal consistency (alphas) indicated that the three campus racial climate factors had reliabilities ranging from .623 to .867. Scales were then computed for each of the three factors using the regression method, where variables are standardized, multiplied by their factor loading, and then added together. Three components of climate – perceptions of racism, quality of interactions with colleagues, and institutional emphasis

on diversity – were measured for each individual respondent and a mean was calculated for all respondents at the same institution. Thus, each survey participant had two measures of each climate factor: their own assessment, and the mean assessment of Black professors employed at the same institution.

Table 1
Descriptives for Variables in HLM Analysis

Variable	Mean	SD
Hours per week advising/counseling students	2.44	0.82
<u>Level 1 (n=500)</u>		
Female	1.46	0.50
Age	5.35	2.10
Number of children under the age of 18	0.65	0.95
Graduate school prepared you for role as faculty mentor	2.34	0.69
Part-time undergraduate faculty	1.02	0.15
Faculty member who only teaches graduate students	1.24	0.43
Full time undergraduate faculty	1.74	0.44
Academic rank	2.75	0.94
Tenure status	2.37	0.76
Dean or department chair?	0.18	0.39
Has taught ethnic studies courses	1.26	0.44
Has done research on ethnic minorities	1.50	0.50
Humanities and Arts	0.24	0.43
Math and Engineering	0.06	0.24
Life and Health Sciences	0.16	0.36
Physical Sciences	0.04	0.19
Social Sciences	0.16	0.36
Professional Programs	0.15	0.36
Other Technical Field or Department	0.01	0.11
Other Nontechnical Field or Department	0.10	0.30
Perceptions of student ability to do college work (able)	3.07	0.80
Individual assessment of racism in the environment (postive)	-0.060	0.83
Individual assessment of interactions with colleagues (positive)	-0.130	0.94
Individual assessment of institutional emphasis on diversity (positive)	-0.020	0.94
<u>Level 2 (n=59)</u>		
Historically Black college or univeristy (HBCU)	1.02	0.13
Student enrollment	19336.63	11536.81
Percentage of the student body that are underrepresented minorities	3.22	0.81
Mean assessment of racism in the environment (hospitable)	-0.14	0.41

Table 2

Factor Reliabilities and Loadings for Climate Variables

	Factor Loadings
Institutional commitment to diversity ($\alpha = .867$)	
It is an institutional priority to increase the number of minorities in the faculty and administration (1 = low to 4 = highest)	0.853
It is an institutional priority to increase the minority population at my institution (1 = low to 4 = highest)	0.822
It is an institutional priority to have a diverse multi-cultural environment (1 = low to 4 = highest)	0.807
Perceptions of discrimination ($\alpha = .623$)	
Subtle discrimination is a source of stress (1 = extensive to 3 = not at all)	0.761
I perceive a lot of campus racial conflict here (1 = agree strongly to 4 = disagree strongly)	0.534
I have to work harder to be perceived as a legitimate scholar by my colleagues (1 = to a great extent to 3 = not at all)	0.519
Interactions with colleagues ($\alpha = .733$)	
Satisfaction with professional relationships with other faculty (1 = not satisfied to 4 = very satisfied)	0.930
Satisfaction with social relationships with other faculty (1 = not satisfied to 4 = very satisfied)	0.787
There is respect for diverse values and beliefs on campus (1 = not descriptive to 3 = very descriptive)	0.381

The primary independent variable of interest in this study falls within the mentor characteristics category: preparation to mentor. Faculty were asked to indicate the extent to which they feel the training they received in graduate school prepared them well for their role as a faculty mentor (1 = not at all; 2 = to some extent; 3 = to a great extent).

Analysis

First, a missing data analysis was conducted to retain valuable cases. Missing data were replaced for variables with fewer than 15% of responses missing. An EM algorithm was utilized due to its use of all quantitative variables in the analysis to predict and impute missing data. It also accounts for data missing at random (MAR), not only data missing completely at random (MCAR) (Allison, 2002).

Hierarchical linear modeling (HLM) was the primary mode of quantitative analysis. While this study focuses on the influence of individual mentor characteristics and socialization on faculty work and outcomes, it is important to account for differences in mentoring patterns and outcomes across institutions. Conventionally, HLM is used when the total variance of the dependent variable which is accounted for by differences across institutions, or interclass correlation (ICC), is greater than or equal to .10. In preliminary analyses, it was determined that the

dependent variable did not have an ICC over .10 (hours per week advising and counseling students = .010). Regardless, HLM was employed as the primary mode of analysis for consistency and due to its ability to account for more error than other modes of analysis and decrease the likelihood of making Type I errors (Raudenbush & Bryck, 2002).

Phase 2: Qualitative Analysis

A qualitative analysis was incorporated into this study, adding to our understanding of how and why faculty socialization is or is not related to engagement in developmental relationships or faculty outcomes. The qualitative portion of this project was conducted as an interpretive multi-case study. According to Merriam (1998), interpretive case study goes beyond describing phenomena. It encourages the collection and coding of data in ways that support, challenge, or develop theory about events, experiences, and outcomes. Multi-case studies are designed to include data collection and analysis of more than one case (i.e. more than one professor), allowing for comparison across cases and enhanced external validity of findings (Bogdan & Biklen, 1998; Merriam, 1998).

Sample

In-depth interviews were conducted with 28 African American professors employed at two public research universities of similar size and institutional mission: Oceanside University and Column University. Oceanside University is a public institution founded in the early 1900's and located in the western United States. It is a large research university serving over 37,000 students; approximately two-thirds are undergraduates. The ethnic breakdown of the total student population (graduate and undergraduate) at Oceanside University in the fall of 2005 was: 37% White, 33% Asian, 13% Hispanic/Latino, 7% International, 4% African American, and .5% Native American. In 2005, almost 2500 individuals were employed as faculty members at Oceanside. The majority of professors were White (66.4%), and almost a third of the faculty members at Oceanside were from minority groups. Specifically, 2.4% (n=86) African American, 5.1% (n=184) Latino/Hispanic, 21.2% (n=769) Asian/Asian American, and 0.3% (n=10) Native American.

Column University is also a large public research university, but is located on the East Coast in the mid-Atlantic region. Comparable in size to Oceanside, Column enrolls approximately 35,000 students; 25,000 are

undergraduates. In the fall of 2005, 55% of all students, undergraduate and graduate, at Column were White, 12% Asian American, 11% African American, 5% Latino/Hispanic, and .3% Native American. Nine percent of students were international. Almost 2000 faculty were employed at Column in the 2005 academic year, and the majority of faculty on campus were White (69.7%, $n=1993$). While having a smaller population of minority faculty as compared to Oceanside (16% at Column and 29% at Oceanside), Column employs a larger number of African American professors; specifically, 5% ($n=146$) of faculty at Column were Black that year. Additionally, the Column faculty was 2.3% ($n=65$) Latino/Hispanic, 8.5% ($n=242$) Asian/Asian American, and .1% ($n=4$) Native American.

Seventeen Oceanside (10 males, 7 females) and 11 Column professors (6 males, 5 females) agreed to participate in this study. Participants had been professors for an average of 16 years. Five participants were assistant professors, 11 associate professors, and 12 full professors at the time of interview. Faculty were from a diverse group of departments and programs, with the largest proportion of participants teaching in the social sciences ($n=12$), followed by professional programs ($n=5$). Four professors were in math or engineering, two taught in the life sciences, one was in the arts, and one identified as being in an interdisciplinary program.

Procedures

Based on a desire to maximize diversity within the sample, participants were selected and recruited using purposeful sampling (Bogdan & Biklen, 1998). Key administrators in contact with Black professors at Column and Oceanside Universities assisted with compiling contact lists and emailing potential participants for the study. Lists were closely considered by the researcher, and faculty were invited to participate based on their gender, academic rank, and academic field. Potential respondents were initially contacted via email with information about the project and an invitation to participate, and interviews were scheduled with all of those who expressed interest and gave consent. Snowball sampling (Bogdan & Biklen, 1998) was also used to recruit. Individuals who agreed to be study respondents recommended other African American faculty that could add insight by their participation in the project.

Each individual agreeing to participate in the study engaged in a one-on-one semi-structured interview (Bogdan & Biklen, 1998). Prior to each interview, participants completed a brief demographic questionnaire to collect information on their demographics, academic background, and mentoring and advising patterns. Interviews followed, taking approximately 60 to 90 minutes to complete. The interview protocol was developed based on a review of the literature on the experiences of African American faculty and their interactions with students. Participants were asked questions about: their experiences as professors within their respective institutional context; reasons for wanting to enter academe; past experiences as a mentor and protégé; and both the types and quality of relationships they have with the general student body, students of color, and African American students. All participants were asked for permission to record interviews for later verbatim transcription. To protect their identities and ensure confidentiality, all participants are referred to by pseudonyms, and rather than distinguishing them by specific academic department, they are identified by broad academic area.

Analyses

Reflective memos were written within twenty four hours of the completion of each interview. These memos were meant to assist in the process of making sense of potential findings, capturing immediate thoughts and feelings on the discussion, how a given professor's responses related to the responses of others, and emerging connections between themes. I continued to write memos throughout the analysis and writing process in an effort to clarify my thinking around emerging themes and how various aspects of professors' narratives were related to one another.

Once interviews were transcribed, professors' narratives were organized through a systematic coding process, providing a structure allowing for comparison and deeper understanding (Maxwell, 2005). The codes were developed via a deductive and inductive process. In the deductive phase, the research literature on mentoring and other relationships between students and faculty was reviewed and distilled into an initial list of codes. Interview transcripts were then reviewed, and coding schemes were revised to include and account for themes emerging from the data. These codes were used to organize the data using ATLAS ti software. Data obtained from interviews was analyzed using the —pattern

matching” technique (Yin, 1994), where data collected from participants is compared to existing literature and theory. In this case, emergent themes were compared to existing research on faculty socialization and participation in developmental relationships. Finally, demographic data collected on pre-survey questionnaires were entered into SPSS and analyzed using basic statistical descriptive techniques to supplement professors’ narratives.

Validating findings

After data were analyzed and an initial written report of findings was completed, I utilized a member checking strategy to validate findings (Maxwell, 2005). All participants were emailed a summary of emergent findings and solicited for feedback. All participants were invited to discuss these findings further, and in person or phone appointments were scheduled with all interested participants. Further, all respondents had the right to review their transcripts and comments which appeared in the text of the manuscript, and were able to edit, omit sections of, or prohibit use of their transcript or interview recording.

In addition to member checks, a test of intercoder reliability was conducted to ensure reliability of interpretation and understanding of professors’ narratives (Fink, 2006; Lombard, Snyder-Duch, & Bracken, 2005). With the help of a volunteer coder, kappa statistics, which assess the agreement between coders beyond chance (Fink, 2006), were calculated using SPSS software for each. Additionally, we calculated an average kappa for all codes. The average kappa for all codes was within the moderate range (.716). Two items in the coding scheme had kappa statistics below .40, and were discussed and revised to enhance clarity and accuracy of the codes.

Limitations

Employing a mixed methods design allows for the minimization of many limitations associated with qualitative and quantitative research; however, aspects of the design, measures, and sample must be kept in mind as the findings of this study are presented. For example, while the 2004 HERI Faculty Survey provides a tremendous overview of a national sample of scholars, there are certain limitations associated with using this instrument for these analyses which are largely consistent with the limitations of utilizing any secondary data source. This survey was

developed by scholars at the Higher Education Research Institute to assess professors' values, perceptions, work behaviors, and outcomes; it is not necessarily designed to assess mentoring patterns or the faculty socialization process. The questions on the survey could not be changed; therefore, while there is a question which asks about whether faculty felt prepared by their graduate experiences to mentor, there are not additional measures which can be used to gain a more complete understanding of the faculty socialization process or mentoring knowledge acquisition. Further, the question assessing student-faculty interaction asks how many hours professors spend advising or counseling students each week. No distinction is made between types of students with whom faculty are working, making it somewhat unclear whether respondents are indicating whether they are reporting time spent with undergraduate or graduate students, or in fact both.

There are also limitations to the qualitative analysis which must be acknowledged. Participants were invited to participate in an interview which discussed their relationships with students, and were free to choose whether they wanted to engage in this study. It is possible that those who had strong feelings about working with students or were more actively engaged in developmental relationships would have more to say and were more likely to express an interest in participating based on their commitment to the topic. Thus the findings of this study may be reflective of the perspectives of Black professors who feel strongly about mentoring, and lacking in representation of the voices of those who feel student interaction is less important.

Findings

Mentoring Knowledge Acquisition

Qualitative analysis

Interview participants described the origins of their mentoring style and philosophy regarding student interaction, with most acquiring knowledge about mentoring during graduate school or during their years as professors. Interestingly, no one indicated participating in any type of formal training which prepared them to mentor. There are no comments suggesting participants took courses in student development, made efforts to develop skills in counseling, or attended mentoring workshops.

Rather, participants described learning how to work with students from watching the behavior of professors.

Some participants linked their mentoring style to their observations of their teachers throughout the full range of their educational experiences; however, most mentoring knowledge acquisition appeared to occur during graduate school. Specifically, much of the learning participants described took place during the observation of their own faculty mentors and advisors. In fact, mentoring knowledge acquisition was often described in ways which suggest it is synonymous with having exposure to a faculty mentor in graduate school. For example, Reginald Spencer acknowledged that in developing his mentoring skills and style, —~~s~~ome stuff is learned from being mentored and those kinds of things other people did for you.” Matt Miller admitted that many of his developmental relationships with students ~~replicate~~ the relationships I’ve had with my own advisors and mentors.” Calvin Carson noted his promotion of fairness and equity through developmental relationships mirrors the efforts of his mentors. Associate professor Eric Carter shared that much of his mentoring style was based on what he observed in professors with whom he felt a connection, saying, —I think I emulated some things from when I was a student from some of the teachers that I really connected with and emulated a lot of what they did.” Karla Trent expressed similar sentiments, describing the attention she paid to Black professors she had during her undergraduate education and how this shaped her own:

I didn’t have a whole lot of Black professors as an undergrad – a couple. And I wouldn’t say that I spent a lot of time with them actually, but they were significant. I remember the influence they had . . . I just learned a lot in my observations of them.

Perhaps Alice Butler best captures this principle as she described her mentor and what she learned from him. After highlighting the importance of creating a non-threatening space for students to share and get feedback on their work, she explained this was a strategy that she adapted from her faculty advisor in graduate school:

I learned that from him [my faculty advisor] . . . he had a famous mentor himself and he patterned his way of mentoring students

after his mentor. So, you know, like socialization and child rearing – you often do what you see your parents doing.

Thus, Dr. Butler sees herself as part of a longer chain of relationships which ultimately has an influence on her own mentoring. In some ways, she has acquired knowledge about developmental relationships not only from her graduate advisor, but from his advisor as well because he too was emulating a mentor from a past developmental relationship.

Socialization and Engagement in Developmental Relationships

Quantitative analysis

Table 3 displays the hierarchical linear model predicting faculty engagement in developmental relationships based on the constructs described in Hunt and Michael's (1983) mentoring model: mentor characteristics, protégé characteristics, and environmental factors. This model predicts 3.1% of the variance in reported time spent advising.

Significant predictors of hours per week spent advising and counseling students all fall within the "mentor characteristics" variable block. Faculty who teach only graduate students advise less than their colleagues who are undergraduate faculty ($b = -.201$, $p = .031$), and both humanities and arts ($b = -.295$, $p = .010$) as well as math and engineering professors ($b = -.574$, $p = .002$) report spending fewer hours each week advising and counseling students than social sciences faculty.

Most pertinent to this study, faculty socialization is positively related to time spent advising and mentoring ($b = .150$, $p = .010$). The variance in the relationship between socialization and advising time across institutions is not statistically significant ($\tau = .00032$, χ^2 (54 df) = 50.488, $p > .500$). In other words, professors feeling well prepared to mentor are more often engaged in developmental interactions than their peers who were less confident in their training, and this finding is consistent across institutions.

Table 3

Hierarchical Model Predicting Hours per Week Spent Advising or Counseling

Independent Variables	b	SE	p
Intercept	2.457	0.045	0.000
<i>Level 1 Variables</i>			
Female	-0.087	0.055	0.317
Age	0.017	0.022	0.438
Number of children under the age of 18	-0.024	0.043	0.577
Graduate school prepared you for role as faculty mentor	0.150	0.058	0.010
Part-time undergraduate faculty ~	-0.337	0.188	0.170
Faculty member who only teaches graduate students ~	-0.201	0.093	0.031
Academic rank	0.100	0.069	0.147
Tenure status	-0.159	0.083	0.055
Dean or department chair?	0.106	0.113	0.348
Has taught ethnic studies courses	0.088	0.103	0.395
Has done research on ethnic minorities	0.015	0.092	0.871
Humanities and Arts*	-0.295	0.114	0.010
Math and Engineering*	-0.574	0.183	0.002
Life and Health Sciences*	-0.068	0.129	0.596
Physical Sciences*	0.011	0.231	0.964
Other Nontechnical Field or Department*	-0.196	0.152	0.196
Professional Programs*	-0.186	0.127	0.144
Other Technical Field or Department*	-0.380	0.351	0.281
Perceptions of student ability to do college work	0.071	0.052	0.172
Individual assessment of racism in the environment	-0.110	0.062	0.078
Individual assessment of interactions with colleagues	-0.019	0.047	0.687
Individual assessment of institutional emphasis on diversity	0.069	0.045	0.123
<i>Level 2 Variables</i>			
Historically Black college or university (HBCU)	0.294	0.172	0.092
Student enrollment	0.000002	0.000003	0.523
Percentage of the student body that are underrepresented minorities	0.031	0.055	0.583
Mean assessment of racism in the environment	-0.289	0.150	0.059
Mean assessment of interactions with colleagues	0.262	0.178	0.147
Mean assessment of institutional emphasis on diversity	-0.207	0.151	0.176

~ Comparison group - Undergraduate faculty

* Comparison group - Social Sciences Faculty

Bold - Statistically significant
at $p < .05$ *Qualitative analysis*

An analysis of the qualitative data can provide insight into how mentor characteristics, specifically knowledge acquisition during graduate school, may be related to participation in developmental relationships. Several professors were socialized in ways which emphasized the importance of student interaction. Their faculty advisors and mentors did not explicitly say working with students is important; rather, participants appear to place importance on developmental relationships because faculty were willing to invest that time in their own growth. For

example, past mentoring experiences encourage Professor James to forge similar ties with her own students because she recognizes the value of those interactions:

I think I have had some incredibly valuable interactions with faculty over time . . . So I think it's very important. It's something that deserves as much time and attention as I can give it.

For Jonathan Baker, being able to mentor and work with students in the way he was developed by his own faculty advisors makes him feel good and is part of fulfilling his responsibility to support others:

. . . [I have] the opportunity to help them – help give them some perspective, to give them some guidance and motivation, and that makes me feel good to be able to play that role. Again, I feel like professors invested in me in that way and I feel that it's important to give back in the same way.

Diane Willis also reflected on a mentor who reached out to her, drawing her to the academic side of her field of study. Recognizing the significance of this relationship and her faculty mentor's proactive way of advising her, Dr. Willis realizes the larger importance of reaching out to students to support them in similar ways, saying, —know that whenever I have the energy to do so I need to frequently be the one who will reach out.” Thus, it appears Black professors who had more exposure to developmental relationships with faculty during graduate school, and thus more understanding of what it means to be a mentor, engage in a type of thinking related to the importance of these interactions. This, in turn, can lead them to more often engage with students because of the commitment to student interaction their mentors instilled within them.

Socialization and Nature of Developmental Relationships

Qualitative analysis

Consistent with Hunt and Michael's (1983) framework, professors' narratives also illuminated the connection between mentor characteristics and the nature of the developmental relationships Black faculty members form. There was an acknowledgement amongst some participants that

learning could take place through less than positive interactions with faculty advisors, driving a small group of professors to treat students in the ways they wish they were treated. It was more common, however, for participants to reflect on how they were able to incorporate their mentors' behaviors into both the psycho-social and career aspects of their own developmental relationships. Some participants had mentors who reinforced the importance of attending to personal issues outside of the classroom. This was deemed as helpful and important to student development, particularly for Black students. For example, Wallace Pearson appreciated his graduate school mentor's attention to his life outside of the classroom, and mirrored this concern in his own developmental relationships with students:

When you're Black and come from a low income background, life issues can be further intensified. I mean, the time you have to give to family members – it just becomes really complex . . . the thing I appreciated about [my advisor] was that she seemed to understand that. She wanted to always make sure we were just ok as human beings first . . . and that's what I try to do.

Similarly, scholars incorporated their advisors' skill development strategies into their respective mentoring styles. Alice Butler noted that she grew from being able to have timely feedback from and unscheduled discussions with her mentor about her work, and tried to be on campus and accessible to her students in similar ways to facilitate their development. Eileen Smith credited her advisor with teaching her what it meant work with students in constructive and collaborative ways, allowing them to build strong skill sets before entering the world of academia. Dr. Smith explained that while in graduate school, her faculty advisor

. . . was one of the people who had really taught me how to be a mentor and what it meant to be a mentor and how you support students . . . They would encourage you to write papers where they would be a supportive author expecting you to be the lead author. And there are people here who don't even understand why that is so important . . . that is something that a lot of people never learn.

Kevin Jones made similar comments, acknowledging he learned the importance of co-authoring with students through his experiences with his faculty mentors in graduate school, and similarly tries to collaborate with students whenever possible to foster their development. Thus, it appears that professors were adopting not only their mentors' commitment to working with students; they also embodied the behaviors of their faculty mentors and advisors as they worked with students.

Discussion and Implications

Hunt and Michael's (1983) framework suggests the frequency and nature of interactions between mentors and mentees are shaped by three forces: the characteristics of the environment, the characteristics of the mentor, and the characteristics of the mentee. Interestingly, the quantitative analysis suggests environmental, mentor, and protégé characteristics predict a small amount of the variance in the time Black professors spend advising and counseling students. While environmental characteristics and protégé characteristics were largely unrelated to the time Black faculty at research universities spent in developmental relationships, several mentor characteristics mattered. While there has been general work exploring the influence of mentor characteristics like race/ethnicity, gender, and academic department on engagement in developmental relationships, this study reveals a significant relationship between how Black professors were socialized into their faculty roles as mentors and the amount of time they spend with students. Those who felt well prepared for mentoring by their graduate school experiences spent more time advising and counseling than their peers.

This study attends specifically to how Black professors gain mentoring knowledge during graduate school, adding to our understanding of how these faculty are socialized into their roles as mentors and advisors. Austin (2002) notes that the faculty socialization process is generally dominated by the apprenticeship model, and the findings of this study largely confirm this assertion as we attend specifically to learning about mentoring. Austin suggests students gain access to information and job skills through their close working relationships with faculty, and that young scholars are "keen observers and listeners" (p. 104), attending to and emulating the behaviors of their advisors. Consistent with this conceptualization of socialization, participants in the qualitative study lacked formal training or guidance around mentoring; their narratives

suggest a large component of their mentoring knowledge acquisition was observational. When they were graduate students, these participants took note of the behaviors of their own faculty advisors, describing themselves as embodying both their mentors' commitment to and behaviors within developmental relationships. Thus, it appears training and preparation to mentor is in many ways synonymous amongst professors in this sample with being mentored themselves by faculty during graduate school. Future research should more fully explore how faculty learn to mentor," examining whether these findings are consistent amongst Black professors employed at various institutional types. Further, while the socialization literature suggests much of learning in graduate school is observational and it is likely this is true across racial and ethnic groups, a study which focuses on how faculty are socialized about mentoring utilizing a diverse sample would indicate whether these patterns of learning are consistent for faculty more generally. Such a study would also allow for a more detailed exploration of how negative relationships with professors or less positive messages about the importance of mentoring during graduate school may influence faculty mentoring patterns.

Considering the importance of observational learning in this process, perhaps social learning theory (Baldwin, 1973; Bandura, 1969; Zimbardo & Gerrig, 1995) is an appropriate frame for understanding much of what takes place as young scholars are socialized into faculty life. Observational learning suggests that humans can learn from watching much like they learn from actually engaging in a behavior; we can observe behaviors and how they are received (positively or negatively), which in turn shapes the observer's actions. Interview participants watched their advisors mentoring and working with students, taking note of what they and others appeared to appreciate, and incorporated similar strategies in their own mentoring. While some professors incorporated their mentor's efforts to offer psychosocial support, more attention was focused on strategies to develop students' academic skills and abilities.

If preparation to take on one's role as a mentor is indeed roughly equivalent to receiving mentoring as the narratives presented in this study suggest, this work reinforces the importance of good advising, particularly for those from underrepresented backgrounds. Past literature has established the connection between mentoring and a host of positive outcomes for Black graduate students such as increased professional

aspirations, development of academic skills, and increased self confidence and comfort in academe (Adams, 1992; Hill, Castillo, Ngu, & Pepion, 1999; Patton & Harper, 2003; Smith & Davidson, 1992). However, this study also shows past experiences with mentoring are related to future mentoring behaviors. These findings are consistent with work presented by mentoring scholars in business, who have linked intentions to mentor and engagement in developmental relationships to previous participation in these relationships, particularly as protégés (Ragins & Cotton, 1993; Ragins & Scandura, 1999). Thus, if it is our aim to train a professoriate which values developmental relationships and student interaction, it appears the first step in doing so would be to ensure graduate students have access to good mentoring. It is recommended that deans, department chairs, and other senior academic administrators remind graduate faculty that they can serve as role models of what good mentoring practice looks like. Providing incentives which encourage faculty to form developmental relationships, such as considering one's skill and engagement in mentoring more seriously in the tenure and promotion process, can certainly aid in this effort.

Considering the importance of mentoring to the success of graduate students of color and the socialization process which prepares young scholars to enter academe, one might expect these relationships were more commonplace. Students far too often cite the absence of these relationships and their difficulty finding faculty with whom they connect, thus hindering their growth and development as scholars (Anthony & Taylor, 2004; Nerad, Aanerud, & Cerny, 2004; Nyquist et al., 1999). Finding a mentor can be particularly challenging for Black students, who frequently express a desire for and the absence of advising sensitive to their unique experiences navigating the sometimes hostile world of academia (Bowman et al., 1999; Guiffrida, 2005; Patton & Harper, 2003). Without the attention of a mentor, graduate students are described as particularly likely to become disillusioned with academia, effectively removing otherwise talented and able students from the faculty pipeline (Austin, 2002).

Thus, as we aim to improve the retention of Black graduate students and success of Black faculty, we must re-double our efforts to ensure these students are well mentored. It is recommended that both academic and graduate student support programs be more aware of whether or not *all* of their students are being mentored, as well as establish formal

programs which connect students with faculty members who would be interested and willing to offer support and direction through developmental relationships. This recommendation is not at all unlike suggestions which have been made previously by several scholars and researchers (e.g. Adams, 1992; Davidson & Foster-Johnson, 2001; Hill et al., 1999; Juarez, 1991; Smith & Davidson, 1992); however, it differs slightly in that the findings of this study highlight the potential ongoing influence and importance of these relationships in shaping graduate students' mentoring behaviors as faculty members. As we remind graduate faculty of the importance of developmental relationships, adding that these relationships have the ability to shape and support future generations of students may make arguments even more compelling.

Finally, while it is positive to note that there is some learning taking place which prepares faculty for their roles as mentors, it is also important to identify the weaknesses in the observational nature of faculty socialization for student learning and development. Just as experience as a student in a classroom does not fully prepare students to teach, experience as a mentee does not fully prepare a professor to be a skilled advisor. Based on their qualitative narratives, Black professors in this study appear to be perpetuating behaviors and engaging in developmental relationships that mirrored their own. They rarely described themselves as critically analyzing which developmental interactions would best meet their students' unique needs. Further, faculty less often noted that they observed behaviors which would prepare them to help students cope with the personal problems and struggles they face outside of the classroom. Certainly Black professors have some understanding of student concerns, particularly of underrepresented students, based on their own similar experiences in academia (Allen, 1985; Fries-Britt & Griffin, 2007; Loo & Rollison, 1986; Patton & Harper, 2003). However, it is impossible to account for the full range lived experiences within communities of color or be prepared to offer students comprehensive social support simply based on racial/ethnic similarity. And what happens to the graduate students with no mentor to emulate? Will they be able to develop the tools necessary to balance their work with students with their additional responsibilities?

This is not to suggest all graduate students should be trained as professional counselors. Instead, much like programs developed to

improve the teaching skills of graduate students entering the professoriate, the findings of this study suggest structured mentoring training can and should be incorporated into the faculty socialization process. In addition to offering workshops on how to work with your advisor, build presentation skills, and learn new research methods, it is recommended that individual faculty members and graduate student services offices integrate training that involves teaching students how to work with their future advisees. Mentoring training also must be incorporated into development programs serving junior faculty. This would provide support for those who have little knowledge or preparation to mentor upon entering an academic position, enabling and motivating them to work with students in balanced ways which speak to the needs of both members of the relationship.

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